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What is claimed is:

- 1. A fuel cell system comprising:
 - a fuel preparation unit;
- a fuel cell unit connected to said fuel preparation unit;
 said fuel cell unit having a first operating parameter and
 said fuel cell system having a second operating parameter which
 changes in a known manner as a function of time;
- a measuring unit for measuring at least said first operating parameter; and,
- an evaluation unit incorporating said measuring unit and being configured to evaluate a time-dependent change of said first operating parameter in dependence upon the time-dependent change of said second operating parameter.
 - 2. The fuel cell system of claim 1, further comprising a generator for generating the known change of said second operating parameter as a function of time.
 - 3. The fuel cell system of claim 1, wherein said second operating parameter is an electrochemical operating parameter of said fuel cell system; and, wherein said fuel cell system further comprises a generator for generating the known change of said second operating parameter as a function of time.
 - 4. The fuel cell system of claim 1, wherein said second operating parameter is a non-electrical operating parameter of said fuel cell system; and, wherein said fuel cell system further comprises a generator for generating the known change of said second operating parameter as a function of time.

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- 5. The fuel cell system of claim 1, wherein said evaluation unit is configured to compare a time-dependent change of said first operating parameter to a desired change of said first operating parameter.
- 6. The fuel cell system of claim 1, wherein a change of said second operating parameter causes a change of said first operating parameter; and, wherein said evaluation unit further comprises a filter device for separating said change of said first operating parameter from changes of other operating parameters of said fuel cell system.
- 7. The fuel cell system of claim 1, wherein said evaluation unit includes at least one control unit for controlling said fuel cell unit.
- 8. The fuel cell system of claim 1, wherein said evaluation unit includes a control unit for controlling said fuel preparation unit.
- 9. The fuel cell system of claim 1, wherein said evaluation unit includes a recording device for recording the time-dependent trace of at least one of said operating parameters.
- 10. A motor vehicle comprising:
- a fuel cell system incorporating a fuel preparation unit and a fuel cell unit connected to said fuel preparation unit;
- said fuel cell unit having a first operating parameter and
 said fuel cell system having a second operating parameter which

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changes in a known manner as a function of time;

a measuring unit for measuring at least said first operating parameter; and,

an evaluation unit incorporating said measuring unit and being configured to evaluate a time-dependent change of said first operating parameter in dependence upon the time-dependent change of said second operating parameter.

- 11. A generator system comprising:
 - a fuel preparation unit;
- a fuel cell unit connected to said fuel preparation unit;
 said fuel cell unit having a first operating parameter and
 said fuel cell system having a second operating parameter which
 changes in a known manner as a function of time;
- a measuring unit for measuring at least said first operating parameter; and,

an evaluation unit incorporating said measuring unit and

being configured to evaluate a time-dependent change of said

first operating parameter in dependence upon the time-dependent

change of said second operating parameter.